

sub B2  
A1

-16. A set of electrophoretic probes for detecting the presence or absence of one or more of a plurality nucleotide sequences in a sample, the set comprising a plurality of probes selected from the group defined by the formula:

(D, M)-N-T

wherein:

(D, M)-N is an e-tag reporter;

D is a detection moiety;

M is a mobility modifier consisting of from 1 to 500 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron;

N is a nucleotide; and

T is an oligonucleotide specific for at least one of the plurality of nucleotide sequences, each T having a length in the range of from 12 to 60 nucleotides such that at least one nucleotide of T has a capture ligand attached;

and wherein each e-tag reporter of the plurality of electrophoretic probes has a distinct charge/mass ratio so that the e-tag reporters form distinct peaks upon electrophoretic separation.

17. The set of claim 16 wherein said plurality is in the range of from 5 to 100 and wherein M is a mobility modifier consisting of from 1 to 300 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron.

18. The set of claim 17 wherein said distinct charge/mass ratio is in the range of from -0.001 to 0.5.

19. The set of claim 17 wherein D is a fluorophore, chromophore, or an electrochemical label.

sub B3

20. The set according to claim 16, 17, 18, or 19 wherein said formula is D-M-N-T.

21. The set of claim 20 wherein said capture ligand is biotin.